

INORGANIC SOLVENT PROCESS FOR SO₂ POLLUTION CONTROL

Allan Sass and H. F. Bauer

Garrett Research and Development Company, Inc.
1855 Carrion Road, La Verne, California 91750

ABSTRACT

An organic salt mixture has been developed that has a high absorbing capacity for sulfur dioxide. Upon testing in flue gas atmospheres it appears to be very effective in the comparatively complete removal of SO₂ from stack gases, with reasonable loading efficiencies and contacting characteristics. The inorganic salts are a fluid with a very low viscosity at the normal stack gas temperatures of from 250 to 450 F. The vapor pressure of this melt is in the neighborhood of 10⁵ mm, and thus vapor pressure losses would be minimal. The salts are also apparently unaffected by fly ash, and can be easily separated from a fly ash slurry. The SO₂ can be regenerated from the absorbed melt in a conventional manner. It appears that this solvent could provide an improved and lower cost SO₂ scrubbing system than others currently being tested.